

ALLEGANY BALLISTICS LABORATORY

ROCKET CENTER, WEST VIRGINIA

Engineering Field Division/Activity: LANTDIV

Major Claimant: COMNAVSEASYS COM

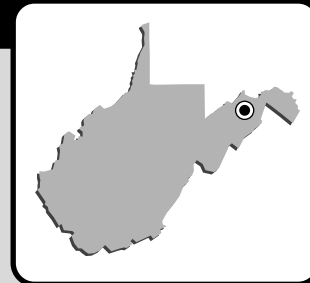
Size: 1,628 Acres (1,572 Acres Navy-Owned)

Funding to Date: \$1,807,000

Estimated Funding to Complete: \$41,669,000

Base Mission: Government-Owned Contractor-Owned (GOCO) research, development and production facility for solid propellant rocket motors for the Department of Defense and NASA

Contaminants: Volatile and semi-volatile organic compounds, explosive compounds, silver, acetone



Number of Sites:

CERCLA: 12
RCRA Corrective Action: 25
RCRA UST: 0
Total Sites: 37

Relative Risk Ranking of Sites:

High: 17 **Not Evaluated:** 12
Medium: 1 **Response Complete:** 3
Low: 4 **Total Sites:** 37

NPL

EXECUTIVE SUMMARY

Allegany Ballistics Laboratory (ABL) is located at Rocket Center, Mineral County, West Virginia, about ten miles southwest of Cumberland, Maryland. ABL is a Government-Owned, Contractor-Operated (GOCO) facility. The contractor, Alliant Techsystems Inc., formerly Hercules Aerospace Corporation, has operated the facility since 1945. ABL has two separate facilities: Plant 1 (1,572 acres), owned by the Navy and operated by Alliant, and Plant 2 (56 acres), owned and operated by Alliant. ABL is primarily a research, development and production facility for solid propellant rocket motors. Chlorinated solvents have been found in the soil and groundwater, with trichloroethene the most prevalent. Lead, zinc, RDX, 2,4,6-TNT, VOCs, the chemical additive TCE, methylene chloride, acetone, silver, nickel, DNT, beryllium and mercury were also detected. Current operations include pollution prevention technologies to prevent further contamination. ABL was placed on the National Priorities List (NPL) in May 1994. Remediation efforts are proceeding through cooperative arrangements with the regulatory community and the general public via the Restoration Advisory Board (RAB).

ABL is bordered on the north and west by the North Branch Potomac River. The eastern and southern boundaries of ABL lie in mountainous terrain. The property to the west of ABL is primarily bottomland and is used for raising crops. A small residential area and some woodlands lie directly north of ABL and are separated from ABL by the River and a railroad right of way. Additional cropland exists on the bottomland northeast of ABL. The area to the east and south of ABL is primarily mountainous woodland, although some cropland and livestock grazing pastures exist in this area. There are two abandoned limestone quarries east of ABL. Surface waters at ABL consist of several unnamed intermittent streams that discharge directly to the River. Piezometric-surface contour maps indicate the groundwater flow direction in the bottomland area to be toward the River. Any contaminants present at the surface at ABL could migrate off the installation to the River via surface pathways.

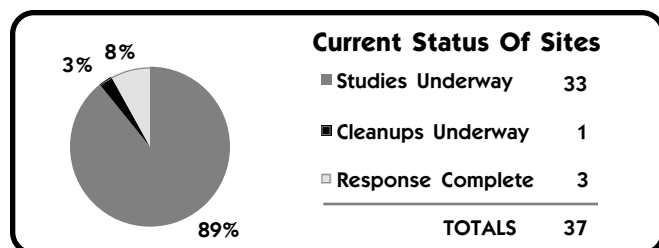
The developed area of ABL is nearly level bottomland lying in the flood plain of the River, while the remainder of the installation is characterized by heavily forested steep rocky slopes. There are no active potable water wells located in the bottomland, however there are five active wells located in the undeveloped upland area.

A Technical Review Committee (TRC) was established in FY89 and a Community Relations Plan (CRP) was completed in FY93. The installation conducted several meetings with active involvement from community members. In FY94 the RAB was formed.

Currently, 33 sites are in a study phase of which eight are CERCLA sites. Seven CERCLA sites are in a Remedial Investigation/Feasibility Study (RI/FS) phase. All 25 RCRA Corrective Action sites are in a RCRA Facility Investigation (RFI). The remaining CERCLA site under study is awaiting funding.

One CERCLA site is currently in the Cleanup phase. A removal action at Site 7, the Beryllium Landfill to remove contaminated soil has begun and all excavated material was placed in roll-off bins for waste characterization. Sites 6, 8 and 9 are Response Complete (RC).

Success has been enjoyed and time savings have been realized through cooperative efforts from the EPA Region III, the states of Maryland and West Virginia, Naval Sea Systems Command and the community. Discussions focus on proposed work thereby streamlining the revised process. Results are immediately shared with all stakeholders so informed discussions can readily be made.



ALLEGANY BALLISTICS LAB RELEVANT ISSUES

ENVIRONMENTAL RISK



HYDROGEOLOGY - ABL is bordered on the north and west by the North Branch Potomac River, which is designated Class I Water by the State of Maryland. The developed area is nearly level bottomland lying in the flood plain of the River, while the remainder of the installation is characterized by heavily forested steep rocky slopes. ABL is underlain by a thick sequence of sedimentary rocks, predominantly limestone. Bedrock crops out or is covered by a thin veneer of soil over most of the undeveloped, mountainous portion of the installation and alluvial sediments overlie the bedrock in the developed bottomland area. The limestones underlying ABL function as aquifers and depth to groundwater is variable in the undeveloped upland area and is less than ten feet in the bottomland area. Surface waters at ABL consist of several unnamed intermittent streams that discharge directly to the River. Stormwater runoff from the developed area of ABL is collected by a system of ditches and culverts that discharge to the River. Topography suggests the groundwater flow direction in the bottomland area to be toward the River. Any contamination at or near the surface in the developed area would be at a higher elevation than the bottoms of the potable supply wells in the undeveloped area. Any contaminants present at the surface at ABL could migrate off the installation to the River via surface pathways.



NATURAL RESOURCES - There are 11 plant and three animal species considered rare, threatened or endangered in Mineral County; none have been observed to date on ABL property.



RISK - A Baseline Risk Assessment, both ecological and human health, has been completed for Sites 1-5 and 10 following the EPA guidance. For the DOD Relative Risk Ranking System, 17 sites were ranked as "high." The high-ranked sites were so ranked primarily due to high concentrations of contaminants of concern, numerous evident pathways and numerous evident receptors both human and ecological. The Agency for Toxic Substance and Disease Register (ATSDR) completed a Site Summary for ABL in March 1995. The Public Health Assessment was conducted in May 1994.

Site 1 poses the greatest risk to human health and the environment and includes potentially exposed receptor populations of on-site workers, current and future recreational users, potential future residents and potential future construction workers. Contaminants of potential concern are primarily volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), dioxins, explosives and inorganics with the most pertinent potential pathways involving surface and subsurface soil and groundwater. Despite relatively high detections of VOCs in the nearby river sediments, the results of a macroinvertebrate survey performed did not indicate an impaired benthic community compared with the background sample.

REGULATORY ISSUES



NATIONAL PRIORITIES LIST - ABL was placed on the National Priorities List (NPL) on 31 May 1994 with a Hazard Ranking System score (HRS) score of 50.00 based on the groundwater pathway only.



LEGAL AGREEMENTS - A draft Federal Facility Agreement (FFA) was submitted to Assistant Secretary of the Navy (ASN) for signature in late FY95. Revisions are necessary and it is anticipated to be submitted for signature in FY96.



PARTNERING - Formal partnering with the regulatory community and facility representatives were initiated in January 1995. The Project Team has improved their skills at resolving differences and arriving at equitable solution. Efforts continue so that we may improve the Team's effectiveness and efficiency. Project Managers meetings are held every other month in conjunction with Restoration Advisory Board (RAB) meetings to optimize our efforts.

COMMUNITY INVOLVEMENT



RESTORATION ADVISORY BOARD - A Technical Review Committee (TRC) was established in 1989 and was converted to a Restoration Advisory Board (RAB). The RAB was officially formed in June 1995 and has become a valuable asset to the remediation efforts at ABL. Comprised of approximately 25 members, the RAB is involved in the review of technical documents, providing community input and relaying the progress of the Installation Restoration Program (IRP). The community has been very supportive of our efforts and has expressed great interest in future projects.



COMMUNITY RELATIONS PLAN - The Community Relations Plan (CRP) was first drafted in 1993 and finalized in May 1994. A revision to the Plan is needed and anticipated to be accomplished in FY96.



INFORMATION REPOSITORY - The Administrative Record was established on 27 July 1994 and an Information Repository was set up at Lavalley Public Library on 27 July 1994. Copies of Administrative Record documents are maintained for public access in the Information Repository.

ALLEGANY BALLISTICS LAB HISTORICAL PROGRESS

FY83

Sites 1-3, 5-9 and 40-41 - An Initial Assessment Study (IAS), equivalent to a Preliminary Assessment (PA), was completed in January 1983. It identified a total of ten potentially contaminated sites. The study concluded that three of the sites (Sites 6, 8 and 9) did not pose a threat to human health or the environment and did not require any further action under the Installation Restoration (IR) program. The remaining seven sites were recommended for further investigation.

FY84

Sites 1-3 and 7-9 - In June 1984 three rounds of sampling and analysis were conducted.

FY86

Sites 1-7 and 10 - The Confirmation Study report, completed in June 1986, recommended further study at Sites 1-7 and at a new site (Site 10), which was identified during the study. Site 4 was split into two sites called 4A and 4B. The Confirmation Study was expanded into an Interim Remedial Investigation (IRI).

FY89

Sites 1-7 and 10 - The IRI Report was completed.

FY90

Sites 1-7 and 10 - The IRI Report recommended no further investigation at Sites 4A and 6 because insignificant levels of contaminants were found at the sites, therefore these sites posed no threat to human health or the environment. The report recommended further investigation at Sites 1-3, 4B, 5, 7 and 10. These sites proceeded into a Remedial Investigation/Feasibility Study (RI/FS). The report also noted that no specific source was identified for the Volatile Organic Compound (VOC) contamination in the groundwater at Sites 2 and 3.

FY92

Sites 1-3, 5, 7 and 10 - An RI/FS began in April 1992.

FY93

Sites 1-3, 5, 7 and 10 - The Draft RI/FS Report was completed in October 1992 and forwarded to both EPA and the West Virginia Department of Environmental Protection for review. Comments were received from the EPA in January 1993.

FY94

Site 1 - Initiated the Focused RI.

Sites 2, 3, 4B, 5 and 10 - Initiated the Phase II RI.

PROGRESS DURING FISCAL YEAR 1995

FY95

Site 7 - An RI/FS was completed and landfill excavation for characterization.

Site 11 - A PA and Site Investigation (SI) were completed.

SWMUs 16, 21-24, 26-27, 34, 36-37, 40, 44, 52, 58-60 and 10000-10008 - An RI/FS is scheduled to begin with an expected completion date of FY97. SWMUs requiring no further action were screened and reduced the list to 40.

PLANS FOR FISCAL YEARS 1996 AND 1997

FY96

Sites 1-3, 5, 10, 40 and 41 - An RI/FSs is expected to be completed.

Sites 1 and 5 - A Remedial Design (RD) is expected to start and be completed.

Site 7 - Planned completion of Draft Engineering Evaluation/Cost Analysis (EE/CA). The Remedial Action (RA) and Final Remedial Action (FRA) are to be completed.

Sites 1 and 5 - An RA is expected to start with a completion date of FY98.

Site 10 - An RD is expected to start with a completion date of FY98.

Site 11 - An RI/FS is expected to begin with a completion date of FY98.

FY97

SWMUs 16, 21-24, 26, 27, 34, 36, 37, 40, 44, 52, 58-60 and 10000-10008 - RCRA Facility Investigations (RFIs) are expected to be completed.

SWMUs 24, 27, 34, and 36-37 - A Corrective Measures Implementation (CMI) will start and be completed.

SWMU 52 - A Corrective Measures Study (CMS) is expected to start.

ALLEGANY BALLISTICS LAB PROGRESS AND PLANS

CERCLA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
PA	10	1						
SI	9	1						
RI/FS		1	7		1			
RD			2		2	2		
RA			1		3	1	2	
IRA								
RC	3		3			1		5
Cumulative Response Complete	25%		50%			58%		100%
RCRA CA	FY94 and before	FY95	FY96	FY97	FY98	FY99	FY00	FY01 and after
RFA	25							
RFI				25				
CMS					1			
DES						1		
CMI				5			1	
IRA								
RC				24			1	
Cumulative Response Complete				96%			100%	